

~~46. (Canceled)~~ An apparatus according to Claim 42, further comprising image forming condition control means for controlling an image forming condition by said image forming means based on the detection output of said density detecting means.}

47. (Amended) An apparatus according to Claim 42, further comprising developing means for developing a latent image formed on said image bearing member, wherein said image forming condition control means controls a voltage applied to said developing means in accordance with detection output of said density detecting means.

REMARKS

Favorable reconsideration and withdrawal of the rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

N.B. Initially, it is noted that the text at page 8, line 14 of Remarks in the response filed should read Column --4-- not Column "9" in reference to Kasahara, et al. The Examiner is kindly requested to amend the Official file if she has already not done so to avoid the possibility of any confusion.

Claims 28 through 32, 36 through 39, 41 through 45, and 47 remain pending in the application. Claims 33 through 35, 40, and 46 have been canceled. Claims 28 through 32, 37, 41, 42, and 47 have been amended to even more succinctly define the invention and/or to improve their form. It is respectfully submitted that no new matter has been added. Claims 28 and 42 are the only independent claims pending in the application.

Claims 28 through 36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,277,162 (Kasahara, et al.) in view of U.S. Patent No. 5,983,044 (Kodama, et al.).

Claims 37 through 47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kasahara, et al. in view of Kodama, et al. and further in view of U.S. Patent No. 5,305,057 (Hattori, et al.).

The rationale underlying each of the foregoing rejections is succinctly set forth in the Official Action. The rejections are respectfully traversed.

Amended independent Claim 28 calls for an image forming apparatus that includes an image bearing member, image forming means, density detecting means, and image forming condition control means.

According to amended Claim 28, the image forming means forms a toner image on the image bearing member, wherein the toner image is transferred to a transfer medium from the image bearing member. The density detecting means detects a density of a toner image for density detection transferred to the transfer medium. The image forming condition control means controls an image forming condition by the image forming means in accordance with a detection output of the density detecting means. A transfer intensity is changeable in accordance with a density of the toner image for density detection formed on the image bearing member when the toner image for density detection is transferred from the image bearing member to the transfer medium.

An inventive feature recited in Claim 28 relates to changing the transfer intensity in accordance with density detection of the toner image for density detection.

According to this feature, toner transfer can be carried out with optimum toner images in accordance with their respective densities.

The Examiner observes that “Kasahara, et al. does not teach that the detection takes place when the toner image for density detection is transfer (*sic.* transferred) from said image bearing member to the transfer medium.” (Emphasis added) The Examiner relies on Kodama, et al. for allegedly teaching this feature. July 30, 2002 Official Action, part 2, at page 3.

Applicants submit the inventive feature does not reside in the timing of the density detection *per se*. Rather in the present invention, the transfer intensity is changeable when the toner image for density detection is transferred from the image bearing member to the transfer medium. It is that transfer intensity at that point in time that is changeable in accordance with the density of the toner image for the density detection. The claimed invention does not require that density detection take place when the toner image for density detection is transferred as the Examiner appears to have construed the claimed invention.

It is respectfully submitted that Kasahara, et al. and Kodama, et al. do not disclose or suggest the foregoing claimed feature.

Amended, independent Claim 42 calls for an image forming apparatus including an image bearing member, image forming means, and an image forming condition control means as recited in amended, independent Claim 28. Claim 42 also calls for an ambient condition detection means for detecting an ambient condition. A transfer intensity, when the toner image for density detection is transferred from the image bearing

member to the transfer medium, is changeable in accordance with an output of the ambient condition detecting means.

An inventive feature recited in amended, independent Claim 42 relates to changing the transfer intensity in accordance with an output of the ambient condition detecting means. According to this feature, toner transfer can be carried out with optimum toner images even if an ambient condition varies.

As above-noted with respect to Claim 28, Applicants respectfully submit neither Kasahara, et al. nor Kodama, et al. fail to disclose or suggest the feature of changing transfer intensity at a time when the toner image for density detection is transferred from the image bearing member onto the transfer medium. Accordingly, the feature of the invention defined in Claim 42 is not disclosed or suggested in either Kasahara, et al. or Kodama, et al.

Hattori, et al. is merely cited for teaching an ambient condition detecting means to adjust an image forming condition which the Examiner observes is not taught in Kasahara, et al. and Kodama, et al.

It is respectfully submitted that Hattori, et al. does not overcome the above-noted deficiencies of Kasahara, et al. and Kodama, et al. whether taken individually or in combination. Accordingly, it is also believed that the invention defined in Claim 42 is also patentable over these references.

It is also respectfully submitted that the combination rejections are not well founded. The Examiner has provided a *rationalization* for combining the teachings of the Kasahara, et al., Kodama, et al., and Hattori, et al. based on an allegation that “it is known in the art to detect the density of an image even after it is transferred to the recording

medium.” However, the Examiner does not identify any teaching whatsoever in any item of the cited art wherein such a teaching can be found. *A fortiori*, the Examiner has not specifically identified where the cited art discloses or suggests that modifying the teaching of one with the teaching of the other can be found.

A combination rejection is proper only when there is some suggestion or motivation in the cited art *per se* to cause one having ordinary skill in the art to combine the teachings of the cited art. There is nothing in the cited art which supports the position that it can be combined in the manner suggested. Even if the art could be so combined, the mere fact that the art can be combined is not sufficient if there is no suggestions in the art that such a combination is desirable. For example, see ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

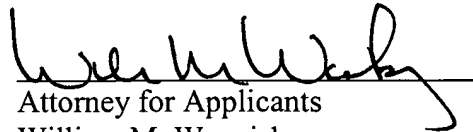
In view of the foregoing discussion, it is respectfully submitted that independent Claims 28 and 42 are allowable over Kasahara, et al., Kodama, et al., and Hattori, et al. whether taken individually or in combination.

Claims 29 through 32, 36 through 39, 41, 43 through 45, and 47 depend either directly or indirectly from one or the other of Claims 28 and 42 and are allowable by virtue of their dependency and in their own right for further defining Applicants’ invention. Individual consideration of the dependent claims is respectfully requested.

It is respectfully submitted that the claims on file are allowable over the art of record and that the application is in condition for allowance. Favorable reconsideration and early passage to issue of the present application are respectfully submitted.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our New York office at the address shown below.

Respectfully submitted,


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VERSION WITH MARKINGS SHOWING CHANGES MADE TO CLAIMS

28. **(Twice Amended)** An image forming apparatus comprising:

an image bearing member;

image forming means for forming a toner image on said image bearing member, wherein the toner image is transferred onto a transfer medium from said image bearing member;

density detecting means for detecting a density of a toner image for density detection transferred to the transfer medium; and

image forming condition control means for controlling an image forming condition by said image forming means in accordance with a [based on the] detection output of said density detecting means,

wherein a transfer intensity, when [is changeable in accordance with a density of] the toner image for density detection [formed on said image bearing member by said image forming means when the toner image for density detection] is transferred from said image bearing member to the transfer medium, is changeable in accordance with a density of the toner image for density detection.

29. **(Twice Amended)** An apparatus according to Claim 28, wherein a [the] transfer intensity when the toner image for density detection having a maximum density image formed on said image bearing member [by said image forming means] is transferred onto the transfer medium is larger than a transfer intensity when the toner

image for density detection having a halftone density image formed on said image bearing member [by said image forming means] is transferred onto the transfer medium.

30. **(Twice Amended)** An apparatus according to Claim 28 or 29, wherein said image forming means includes exposure means for exposing a surface of said image bearing member, which has been electrically charged [to] in accordance with image information with an exposure amount, which is changeable in accordance with the density of the toner image for density detection formed on said image bearing member [by said image forming means].

31. **(Amended)** An apparatus according to Claim 30, wherein a surface potential of said image bearing member exposed by said exposure means is changeable in accordance with the [a] density of the toner [total] image for density detection [to be] formed on said image bearing member [by said image forming means].

32. **(Twice Amended)** An apparatus according to Claim 28 or 29, wherein the transfer intensity when the toner image for density detection is transferred from said image bearing member to [onto] the transfer medium is changeable in accordance with a toner [tone] gradation level of the toner image for density detection formed on said image bearing member [by said image forming means].

37. **(Amended)** An apparatus according to Claim 28, further comprising ambient condition detecting means for detecting an ambient condition, wherein the transfer intensity is controlled in accordance with [on the basis of] an output of said ambient condition detecting means.

41. **(Amended)** An apparatus according to Claim 28 [40], further comprising developing means for developing a latent image formed on said image bearing member,

wherein said image forming condition control means controls a voltage applied to said developing means in accordance with a [on the basis of the] detection output of said density detecting means.

42. **(Twice Amended)** An image forming apparatus comprising:
an image bearing member;
image forming means for forming a toner image on said image bearing member, wherein the toner image is transferred onto a transfer medium from said image bearing member;
density detecting means for detecting a density of a toner image for density detection transferred onto the transfer medium;

image forming condition control means for controlling an image forming condition of said image forming means in accordance with a detection output of said density detecting means; and

ambient condition detecting means for detecting an ambient condition₁;
and]

wherein [control means for controlling] a transfer intensity, when [upon transfer of] the toner image for density detection is transferred from said image bearing member to [onto] the transfer medium, is changeable in accordance with [on the basis of] an output of said ambient condition detecting means.

47. **(Amended)** An apparatus according to Claim 42 [46], further comprising developing means for developing a latent image formed on said image bearing member, wherein said image forming condition control means controls a voltage applied to said developing means in accordance with [on the basis of the] detection output of said density detecting means.